

Please amend the application as follows:

In the Claims

Please amend Claims 1, 2, 5, 20, 21, 27, 28, 31, 46, 47, 55, 56, 58, 70 and 71.

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1. (Four times amended) A recombinant vector comprising, in operable linkage,
- a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
  - b) one or more coding sequences which encode a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, cecropin, prececropin, preprocecropin, magainin, a part thereof, an analogue thereof, a homologue thereof and a combination thereof.
2. (Four times amended) A recombinant vector comprising in operable linkage,
- a) a 5' long terminal repeat region comprising the structure U3-R-U5;
  - b) one or more of said coding sequences wherein at least one sequence encodes for a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, cecropin, prececropin, preprocecropin, magainin, a part thereof, an analogue thereof, a homologue thereof and a combination thereof; and
  - c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence, followed by the R and U5 region to undergo promoter conversion.
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5. (Amended) A recombinant vector comprising in operable linkage,
- a) a 5' long terminal repeat region comprising the structure U3-R-U5;
  - b) one or more coding sequences wherein at least one sequence encodes for at least one naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, cecropin, prececropin, preprocecropin, magainin, a part thereof, an analogue thereof, a homologue thereof and a combination thereof; and
  - D2 c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which regulates the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters.
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20. (Amended) A mRNA of a retroviral provirus produced by infection of target cells with a recombinant retroviral particle from a recombinant retroviral vector system comprising:
- a) a recombinant vector comprising, in operable linkage,
    - i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
    - ii) one or more coding sequences wherein at least one sequence encodes for a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, cecropin, prececropin, preprocecropin, magainin, a part thereof, an analogue thereof, a homologue thereof and a combination thereof; and
  - b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.
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21. (Amended) A RNA produced by a vector wherein said vector comprises, in operable linkage,

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- a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
  - b) one or more coding sequences wherein at least one sequence encodes for a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, cecropin, prececropin, preprocecropin, magainin, a part thereof, an analogue thereof, a homologue thereof and a combination thereof.
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27. (Twice amended) A recombinant vector comprising, in operable linkage,

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- a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
  - b) one or more coding sequences which encode a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof.

28. (Twice amended) A recombinant vector comprising in operable linkage,

- a) a 5' long terminal repeat region comprising the structure U3-R-U5;
- b) one or more of said coding sequences wherein at least one sequence encodes for a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof; and

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- c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence, followed by the R and U5 region to undergo promoter conversion.
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31. (Amended) A recombinant vector comprising in operable linkage,

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- a) a 5' long terminal repeat region comprising the structure U3-R-U5;
- b) one or more of said coding sequences wherein at least one sequence encodes for a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof; and
- c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which regulates the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters.
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46. (Amended) A mRNA of a retroviral provirus produced by infection of target cells with a recombinant retroviral particle from a recombinant retroviral vector system comprising:

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- a) a recombinant vector comprising, in operable linkage
- i) a retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
- ii) one or more coding sequences wherein at least one sequence encodes for at least one naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof; and

- b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

47. (Amended) A RNA produced by a vector recombinant retroviral vector system comprising:

- a) a recombinant vector comprising, in operable linkage,
    - i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
    - ii) one or more coding sequences wherein at least one sequence encodes for at least one naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: melittin, premelittin, prepromelittin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof; and
  - b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.
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55. (Amended) A recombinant vector comprising, in operable linkage,

- c) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
- d) one or more coding sequences which encode a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: cecropin, prececropin, preprocecropin, SB-37, Shiva-1, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof.

56. (Amended) A recombinant vector comprising in operable linkage,
- a) a 5' long terminal repeat region comprising the structure U3-R-U5;
  - b) one or more of said coding sequences wherein at least one sequence encodes for a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: cecropin, prececropin, preprocecropin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof; and
  - c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence, followed by the R and U5 region to undergo promoter conversion.

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58. (Amended) A recombinant vector comprising in operable linkage,
- a) a 5' long terminal repeat region comprising the structure U3-R-U5;
  - b) one or more coding sequences wherein at least one sequence encodes for a naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof, wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: cecropin, prececropin, preprocecropin, a part thereof, an analogue thereof, a homologue thereof and a combination thereof; and
  - c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which regulates the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters.

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70. (Amended) A mRNA of a retroviral provirus produced by infection of target cells with a recombinant retroviral particle from a recombinant retroviral vector system comprising:
- a) a recombinant vector comprising, in operable linkage,

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- i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
  - ii) one or more coding sequences wherein at least one sequence encodes for at least one naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: cecropin, prececropin, preprocecropin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof; and
- b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

71. (Amended) A RNA produced by a vector wherein said vector comprises, in operable linkage,

- a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and
- b) one or more coding sequences wherein at least one sequence encodes for at least one naturally occurring therapeutic antimicrobial peptide or a biologically active derivative thereof wherein the antimicrobial peptide or derivative thereof is selected from the group consisting of: cecropin, prececropin, preprocecropin, a part thereof, an analogue thereof, a homologue thereof, and a combination thereof.

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Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - vii).